

PATENT COOPERATION TREATY

From the Japan Patent Office (INTERNATIONAL SEARCHING AUTHORITY)

To: Mr. Toshinori Yamamoto

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PCT

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY
(Implementing Regulation 40bis.2)
(PCT Rule 43bis.2.1)

Date of mailing
(day/month/year) 19.7.2005

Applicant's or agent's file reference

517-0067

FOR FURTHER ACTION

See paragraph 2 below

International application No.

PCT/JP2005/006608

International filing date (day/month/year)

04.04.2005

Priority date (day/month/year)

08.04.2004

International Patent Classification (IPC)

Int.Cl.⁷ H03H9/25, 3/08, 9/64

Applicant

Murata Manufacturing Co., Ltd.

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☐ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.2.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

2. FURTHER ACTION

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis2(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220

3. For further details, see notes to Form PCT/ISA/220

Date of completion of this opinion

30. 06. 2005

Name and mailing address of the ISA/JP

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**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.
PCT/JP2005/006608

Box No. I Basis of this opinion

1. With regard to the language, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.
☐ This opinion has been established on the basis of a translation from the original language into the following language _____, which is the language of a translation furnished for the purpose of international search (under Rules 12.3 and 23.1(b)).
2. With regard to any nucleotide and/or amino acid sequence disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:
 - a. type of material
☐ a sequence listing
☐ table(s) related to the sequence listing
 - b. format of material
☐ in written format
☐ in computer readable form
 - c. time of filing/furnishing
☐ contained in the international application as filed.
☐ filed together with the international application in computer readable form.
☐ furnished subsequently to this Authority for the purposes of search.
3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
4. Additional comments:

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.
PCT/JP2005/006608

Box No. V Reasoned statement under Rule 43bis.2.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims	1-5	YES
	Claims		NO
Inventive step (IS)	Claims		YES
	Claims	1-5	NO
Industrial applicability (IA)	Claims		YES
	Claims	1-5	NO

2. Citations and explanations:

Document 1: JP 2003-32061 A (Toshiba Corporation)

2003.01.31, entire document and all figures (no family)

Document 2: JP 60-176317 A (Toshiba Corporation)

1985.09.10, Fig. 2(d)

Document 3: Microfilm of drawings and specification attached to the request for Japanese Utility Model Registration Application No. 56-171397 (Japanese Unexamined Utility Model Registration Application Publication No. 58-77921) (Oki Electric Industry Co., Ltd.), 1983.05.26, line 13, page 4 to line 7, page 5, Fig. 4

Document 4: JP 55-41048 A (Tokyo Shibaura Denki Kabushiki-kaisha)

1980.03.22, entire document, Fig. 5

Claims 1-5

Claims 1 to 5 do not involve in an inventive step on the basis of Documents 1 to 4 cited in the international search report.

The aforementioned Document 1 discloses an invention regarding "a surface acoustic wave filter comprising a mount board having a land; a device chip in which a wiring pattern including an IDT and a pad electrically connected to the IDT is formed on one of a pair of parallel and opposing principal surfaces of a piezoelectric substrate, the pad being disposed so as to oppose the land of the mount board, the pad and the land being electrically connected through a bump; and a resin film covering the other principal surface of the piezoelectric substrate and sealing the device chip."

As indicated in the aforementioned Documents 2 to 4, it is well known in the art that "the one of the principal surfaces of the piezoelectric substrate used in the surface acoustic wave filter is relatively large and the other principal surface of the piezoelectric substrate is relatively small, " that "peripheral surfaces of the piezoelectric substrate extending between the pair of principal surfaces each have a parallel planar portion which is substantially parallel to the pair of principal surfaces of the piezoelectric substrate and a vertical planar portion which is substantially perpendicular to the pair of principal surfaces of the piezoelectric substrate, so that the peripheral surfaces of the piezoelectric substrate each have a stepped portion including at least one step," that "peripheral surfaces of the piezoelectric substrate extending between the pair of principal surfaces each have a tapering portion extending along an outer edge of the other principal surface of the piezoelectric substrate," and that "peripheral surfaces of the piezoelectric substrate extending between the pair of principal surfaces each have a curved portion extending along an outer edge of the other principal surface of the piezoelectric substrate."

Therefore, any person skilled in the art could easily have arrived at forming a piezoelectric substrate using the related art even in the invention disclosed in the aforementioned Document 1.

The invention of Claim 5 is only an invention for producing the surface acoustic wave filter in the invention of Claim 1 by a general method. Therefore, any person skilled in the art could easily have arrived at this invention on the basis of the inventions disclosed in the aforementioned Documents 1 to 4.